

# A NEW SPECIES OF THE GENUS *FLATOVERTEX* (ORTHOPTERA, OEDIPODIDAE) FROM GUIZHOU, CHINA

ZHANG Dao-Chuan, HAN Hong-Yan

College of Life Sciences, Hebei University, Baoding 071002, China; E-mail: daochuanzhang@yahoo.com.cn

**Abstract** In this paper, a new species of the genus *Flatvertex* Zheng 1981 (Orthoptera: Oedipodidae) is described from Guizhou Province, China. This new species *F. cyanitibialis* sp. nov. is allied to *F. nufotibialis* Zheng but differs from the latter in dorsal side of pronotum without light brown x-shaped markings; hind tibia blue and arolium large, triangular, extending over the middle of claw. A key to species of the genus in China is presented below. The type specimens were deposited in the Museum of Hebei University (MHU), China.

**Key words** *Flatvertex*, new species, Acridoidea, Oedipodidae, Guizhou

The genus *Flatvertex* was established by Zheng in 1981, (type species *F. nufotibialis* Zheng 1981). Zheng *et al.* (2006) described the second species of the genus *F. nigritibialis* Zheng 2006. The main characteristics of this genus are: head and dorsum of pronotum often with dense carinulae and tubercles; frons slightly oblique; frontal ridge wide and flat; vertex wide and flat; anterior margin truncate; lateral keels distinct; median keel of pronotum distinct throughout; deep cut by hind transverse sulcus; lateral keels absent; anterior margin of pronotum angulated obtusely in the middle; elytra long and narrow, extending beyond top of hind femora; intercalary vein in the medial area of the elytron curved towards the medial area; cubital area wider than medial area; hind femora thick and short; its length about four times its width.

In our study on specimens of grasshopper collected from Guizhou, China in 2005, we found one new species and describe it below. The type specimens were deposited in the Museum of Hebei University (MHU), China.

*Flatvertex cyanitibialis* sp. nov. (Figs 1-4)

**Male.** Body small. Head big, shorter than pronotum. Head and dorsum of pronotum with dense carinulae and tubercles. Frons slightly oblique; frontal ridge wide and flat. Width of interocular distance 1.7 times as width of frontal ridge between antennae. Vertex wide and flat; anterior margin truncate; lateral keels distinct. Foveolae triangular. Anterior angle of gena with a thick oblique keel. Antennae filiform, 25 segments, surpassing posterior margin of pronotum. Eyes oblong and oval; longitudinal diameter 1.3 times horizontal diameter and 1.3 times its subocular furrow. Median keel of pronotum distinct throughout;

deep cut by hind transverse sulcus; lateral keels absent; anterior margin of pronotum angular; posterior margin obtusely angulated in the middle; metazona a little longer than prozona (1.15 times); posterior margin of lateral lobes of pronotum acutely concave. Width of interspace of mesosternal lobes 1.8 times as its length; metasternum lobes separated. Elytra long and narrow, extending beyond top of hind femora; apex rounded; intercalary vein in the medial area of the elytron curved towards the medial area; cubital area wider than medial area; hind wings shorter than elytra. Hind femora thick and short; its length about four times its width; apex of lower knee blunt rounded. Hind tibia with eight spines on outer side and eleven spines on inner side; without apical spine. Hind tibia slightly shorter than hind femur (about 1.15 times). Arolium large, extending beyond middle of claw. Epiproct triangular. Cercus conical. Subgenital plate conical.

**Coloration.** Male. Body dark brown. In middle and basal part of elytra brown, with two transverse white bands in the middle; anterior margin of elytra light brown. Basal part of hind wing transparent; jugal veins yellowish. Hind femora brown, outer side with three black transversal bands; inner side with two black markings; knees black. Apical three-fifths part of tibia blue, with a white ring in near basal part of tibia.

**Female.** Unknown.

♂. Length of body 17.5–18.5 mm; length of pronotum 4.0–4.5 mm; length of elytron 16–17 mm; length of hind femur 10.5–11.0 mm.

**Holotype** ♂, Leishan County (26°15'–26°32'N, 108°5'–108°24'E; alt. 650–1350 m), Guizhou Province, 18 May 2005, coll. by ZHENG Jin-Yu. **Paratypes** 2 ♂♂, same data as holotype.

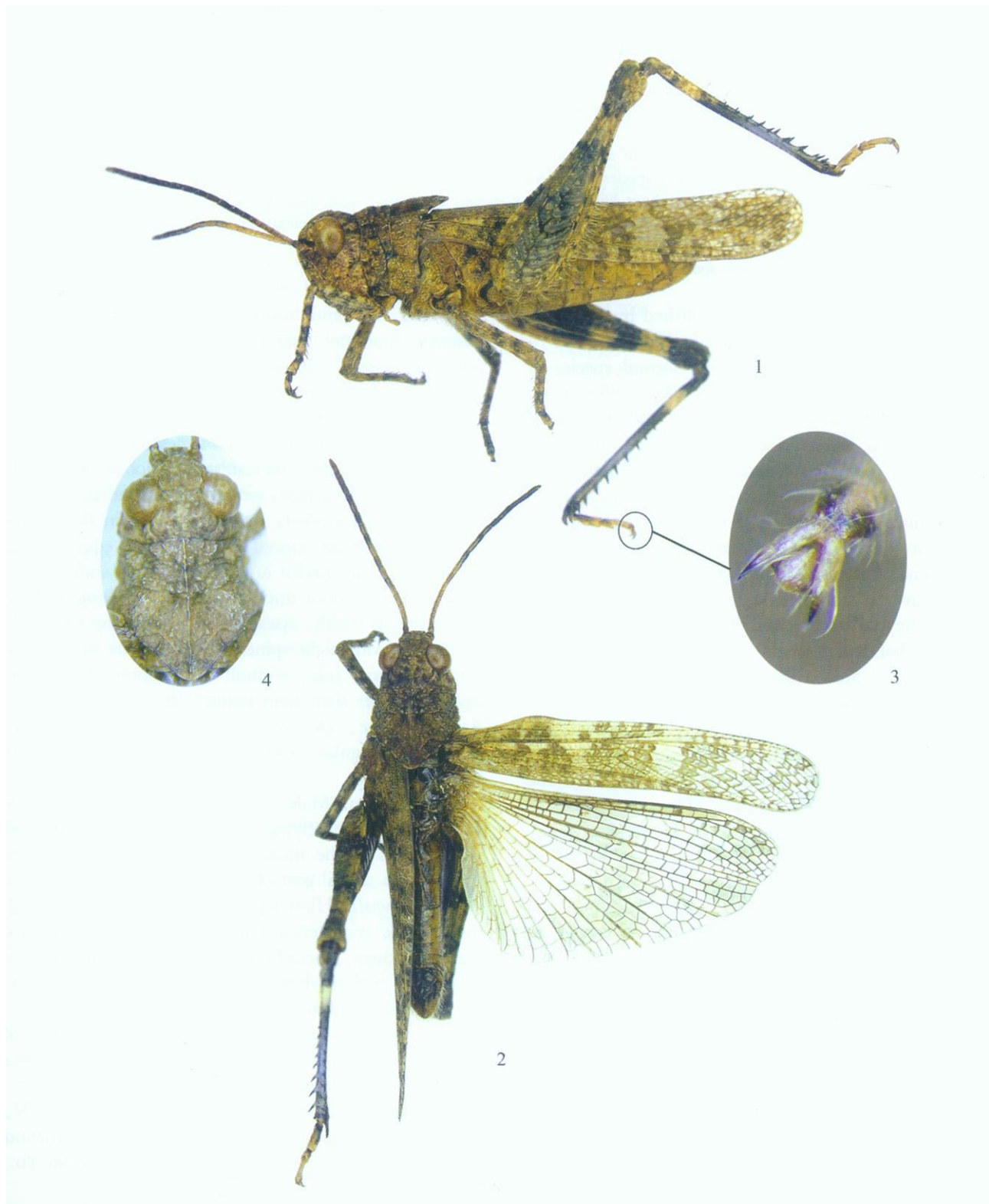
**Etymology.** The specific name is derived from the

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Latin *gyanei* and *thia*, referring to the blue hind thia  
The new species is allied to *F. rufotibialis* Zheng

The major differences between the two species are listed in Table 1.



Figs 1-4 *Flabertex gyaneithialis* sp. nov. male. 1. Lateral view. 2. Dorsal view. 3. Arolium and claw. 4. Dorsal view of pronotum.

Table 1 A comparison between <i>F. cyaneitibialis</i> sp. nov. and <i>F. rufotibialis</i> Zheng		
Characters	<i>F. rufotibialis</i> Zheng	<i>F. cyaneitibialis</i> sp. nov.
Dorsal side pronotum	With light brown x-shaped markings	Without light brown x-shaped markings
Arolium	Arolium big triangular, reaching the middle of claw	Arolium big triangular, extending over the middle of claw
Hind tibia	Apical three fifths part of hind tibia orange-red	Apical three fifths part of hind tibia blue

Key to species of *Flatoververtex* Zheng, 1981

- 1 (2) Hind tibia black, base of hind wing pale yellow, with a dark band in the middle; arolium small, rhombus, not reaching the middle of claw ..... *F. nigriritibialis* Zheng, 2006
- 2 (1) Hind tibia orange or blue, base of hind wing transparent, without a dark band in the middle; arolium large, reaching or extending over the middle of claw
- 3 (4) Dorsal side of pronotum with light brown x-shaped markings; hind tibia orange-red; arolium reaching the middle of claw ..... *F. rufotibialis* Zheng, 1981
- 4 (3) Dorsal side of pronotum without light brown x-shaped markings; hind tibia blue; arolium extending over the middle of claw ..... *F. cyaneitibialis* sp. nov.

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贵州蝗虫一新种记述 (直翅目, 斑翅蝗科)

张道川 韩鸿雁  
河北大学生命科学学院 保定 071002

**摘要** 记述采自贵州雷山地区蝗虫 1 新种, 即蓝胫平顶蝗 *Flatoververtex cyaneitibialis* sp. nov., 新种近似于红胫平顶蝗 *F. rufotibialis* Zheng, 1981, 区别特征为: 前胸背板中隆线两侧不具 X 形纹; 后足胫节蓝色; 爪间中垫大, 超过爪之中部。并附有平顶蝗属种的检索表。模式标本保存于河北大学博物馆。

**关键词** 平顶蝗属, 新种, 蝗总科, 斑翅蝗科, 贵州。

**中图分类号** Q969. 265. 1

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